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| 10/812,644 | 03/29/2004 | Tsung Wei Chiang | | 3402 |

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WEI TE CHUNG
FOXCONN INTERNATIONAL, INC.
1650 MEMOREX DRIVE
SANTA CLARA, CA 95050

| EXAMINER | |
|---|---|
| CUTLER, ALBERT H | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/812,644 | CHIANG, TSUNG WEI | |
| | Examiner | Art Unit | |
| | Albert H. Cutler | 2622 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *04 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *14-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This office action is responsive to communication filed on September 4, 2007. Claims 1-13 have been cancelled, and newly submitted claims 14-29 are pending in the application.

### *Response to Arguments*

2. The cancellation of claims 1-13 has rendered the rejection of said claims moot. Applicant asserts that newly presented claims 14-29 overcome the Ting prior art. The Examiner respectfully disagrees, and a response to the new limitations to the claims can be found in the rejection below.

### *Oath/Declaration*

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> It does not identify the **zip code** of residence of each inventor. The residence information may be provided on either an application data sheet or supplemental oath or declaration.

**Applicant failed to address the defective oath in the reply filed September 4, 2007.**

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 14-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Ting(US 6,665,455).

Consider claim 14, Ting teaches:

A digital camera module for use in a portable electronic device(figures 2-6), comprising:

a lens holder(figure 2), comprising a base(100 and 200, figures 2-6) and a tube element for receiving a lens(100, figures 2-6. The inner portion of the top of the base(100) includes a tube element for receiving a lens module(300, column 3, lines 16-48).); and

a printed circuit board(600, figures 2-6);

wherein the tube element is disposed on the base(The tube element extends from the top half of the base(100), figure 3.), the base comprises a bottom portion(200) engaging with the printed circuit board(The bottom portion(200) engages a printed circuit board via a plurality of pegs(203, 204, etc.), figures 3 and 4.), the bottom portion comprises a first sidewall, a third sidewall opposite to the first sidewall, and a second sidewall interconnecting the first sidewall and the third sidewall(The bottom of the base(200) has three sidewalls, with the second sidewall being the longest of the three

sidewalls(see figures 3 and 4).), at least one of the first and the third sidewalls has a holder means for holding the printed circuit board(Both of the first and third sidewalls have holder means(peg 203 and the unmarked peg, see figures 3 and 4) for holding the printed circuit board(600).), the second sidewall has a support means(peg 204, figures 3 and 4) for supporting the printed circuit board(600), and the printed circuit board is located within the holder means(203 and unmarked peg) and the support means(204. A large portion of the printed circuit board(600) is within an area defined by the two holder means and the supports means, which portion of the circuit board contains a through-hole leading to the image sensor(500), see figure 4. Therefore, Ting satisfies the limitation that the printed circuit board is located "within" the holder means and the support means.).

Consider claim 15, and as applied to claim 14 above, Ting further teaches:

the tube element is cylindrical(see figures 3 and 4, claim 14 rationale).

Consider claim 16, and as applied to claim 15 above, Ting further teaches:

The tube element extends from the top of the base(The tube element extends from the top half of the base(100), figure 3.).

Consider claim 17, and as applied to claim 14 above, Ting further teaches:

The holder means is a projection extending from an inner surface of the first sidewall or the third sidewall(Peg 203 and the unmarked peg are both projection means extending from an inner surface of the first and third sidewalls, figures 3 and 4.).

Consider claim 18, and as applied to claim 14 above, Ting further teaches:

the support means(peg, 204) extends from an inner side of the second sidewall(see figures 3 and 4).

Consider claim 19, and as applied to claim 18 above, Ting further teaches:

The support means(204) has at least one projection formed thereon, each projection being configured for positioning the printed circuit board(The support means(204) has a cone shaped projection which protrudes through a hole in the circuit board(600) in order to position the circuit board, figures 3 and 4, column 3, lines 41-47.).

Consider claim 20, and as applied to claim 19 above, Ting further teaches:

wherein the printed circuit board(600) defines at least one positioning hole therethrough(see figure 3) corresponding to at least one projection(204, 203, unmarked peg), and each projection engaging into corresponding positioning hole facilitates the positioning of the printed circuit board with the base(See figure 4, column 3, lines 41-47).

Consider claim 21, and as applied to claim 14 above, Ting further teaches:

wherein the bottom portion(200) further comprises a fourth sidewall(See figures 2 and 3. The bottom portion(200) has a fourth sidewall which is shorter than the first through third sidewalls, and is formed where the printed circuit board is inserted, as shown in figure 2.), the first, the second, the third, and the fourth sidewalls, the holder means, and the support means cooperatively define a slot configured for securing the printed circuit board(See figure 2. A slot is clearly defined for securing the printed circuit board in the correct position. This slot is defined by the four sidewalls, holder means, and support means working in cooperation so as to ensure that the top portion of the base(100), the bottom portion of the base(200) and the printed circuit board(600) are sealed together as one structure, with the circuit board(600) being positioned correctly so as to provide light from the lens to the image sensor. See column 3, line 39 through column 4, line 6.).

Consider claim 22, and as applied to claim 21 above, Ting further teaches:

The fourth sidewall has a support means for supporting the printed circuit board(The top of the fourth sidewall is a support means for supporting the printed circuit board and sealing the base, figure 2, column 3, lines 44-47.).

Consider claim 23, Ting teaches:

A portable electronic device(Ting teaches that image sensing modules can be found in photographing devices used for inspecting manholes and cracks in walls(i.e. portable electronic devices).), comprising:

A camera module(figures 2-6), comprising:

a lens holder(figure 2), comprising a base(100 and 200, figures 2-6) and a tube element for receiving a lens(100, figures 2-6. The inner portion of the top of the base(100) includes a tube element for receiving a lens module(300, column 3, lines 16-48).); and

a printed circuit board(600, figures 2-6);

wherein the tube element is disposed on the base(The tube element extends from the top half of the base(100), figure 3.), the base comprises a bottom portion(200) engaging with the printed circuit board(The bottom portion(200) engages a printed circuit board via a plurality of pegs(203, 204, etc.), figures 3 and 4.), the bottom portion comprises a first sidewall, a third sidewall opposite to the first sidewall, and a second sidewall interconnecting the first sidewall and the third sidewall(The bottom of the base(200) has three sidewalls, with the second sidewall being the longest of the three sidewalls(see figures 3 and 4).), at least one of the first and the third sidewalls has a holder means for holding the printed circuit board(Both of the first and third sidewalls have holder means(peg 203 and the unmarked peg, see figures 3 and 4) for holding the printed circuit board(600).), the second sidewall has a support means(peg 204, figures 3 and 4) for supporting the printed circuit board(600), and the printed circuit board is located within the holder means(203 and unmarked peg) and the support means(204. A large portion of the printed circuit board(600) is within an area defined by the two holder means and the supports means, which portion of the circuit board contains a through-hole leading to the image sensor(500), see figure 4. Therefore, Ting satisfies

the limitation that the printed circuit board is located "within" the holder means and the support means.).

Consider claim 24, and as applied to claim 23 above, Ting further teaches:

the tube element is a cylinder(see figures 3 and 4, claim 14 rationale) extending from the top of the base(The tube element extends from the top half of the base(100), figure 3.).

Consider claim 25, and as applied to claim 23 above, Ting further teaches:

The holder means is a projection extending from an inner surface of the first sidewall or the third sidewall(Peg 203 and the unmarked peg are both projection means extending from an inner surface of the first and third sidewalls, figures 3 and 4.).

Consider claim 26, and as applied to claim 23 above, Ting further teaches:

the support means(peg, 204) extends from an inner side of the second sidewall(see figures 3 and 4).

Consider claim 27, and as applied to claim 26 above, Ting further teaches:

The support means(204) has at least one projection formed thereon, the printed circuit board(600) defines at least one positioning hole therethrough(see figure 3) corresponding to at least one projection(204, 203, unmarked peg), and each projection

engaging into corresponding positioning hole facilitates the positioning of the printed circuit board with the base(See figure 4, column 3, lines 41-47).

Consider claim 28, and as applied to claim 23 above, Ting further teaches:

wherein the bottom portion(200) further comprises a fourth sidewall(See figures 2 and 3. The bottom portion(200) has a fourth sidewall which is shorter than the first through third sidewalls, and is formed where the printed circuit board is inserted, as shown in figure 2.), the first, the second, the third, and the fourth sidewalls, the holder means, and the support means cooperatively define a slot configured for securing the printed circuit board(See figure 2. A slot is clearly defined for securing the printed circuit board in the correct position. This slot is defined by the four sidewalls, holder means, and support means working in cooperation so as to ensure that the top portion of the base(100), the bottom portion of the base(200) and the printed circuit board(600) are sealed together as one structure, with the circuit board(600) being positioned correctly so as to provide light from the lens to the image sensor. See column 3, line 39 through column 4, line 6.).

Consider claim 29, and as applied to claim 28 above, Ting further teaches:

The fourth sidewall has a support means for supporting the printed circuit board(The top of the fourth sidewall is a support means for supporting the printed circuit board and sealing the base, figure 2, column 3, lines 44-47.).

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takiar et al.(US 6,384,397) teach of a circuit board containing an image sensor, which circuit board is inserted into a slot in the base of an imaging module(see figure 12). The imaging module comprises a base having four sidewalls(see figures 11 and 12), and a cylindrical lens housing extending from the top thereof(see figure 12). The imaging module is further detailed in column 8, line 31 through column 9, line 22.

Suzuki et al.(US 5,644,410) teach of inserting an imaging module into a slot created in a portable electronic device(see figures).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert H. Cutler whose telephone number is (571)-270-1460. The examiner can normally be reached on Mon-Fri (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571)-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC

NGOC YEN VU
SUPERVISORY PATENT EXAMINER